

## ABSTRACT

This invention is applicable to a Virtual Private LAN service built using multiple point-to-point Ethernet services from a network operator, where the bridging and the transport/tunneling of Ethernet frames to a remote site are decoupled. The learning bridge function (including MAC address learning and flooding) is performed at customer equipment CE devices, while the tunneling is performed at provider edge PE nodes. The models described here for this VPN refer to hub redundancy, site-to-site SLA guarantees and address discovery in the case of hybrid connections.